

Please type a plus sign (+) inside this box → ☐

Approved for use through 9/30/00. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL <small>(Only for new nonprovisional applications under 37 CFR 1.53(b))</small>	Attorney Docket No.	TUC920030086US1	Total Pages	34
	First Named Inventor or Application Identifier			
	Ralph T. Beeston et al.			
	Express Mail Label No.	ER211528425US		

APPLICATION ELEMENTS <small>See MPEP chapter 600 concerning utility patent application contents.</small>	Assistant Commissioner for Patents ADDRESS TO: Box Patent Application Washington, DC 20231
--	--

<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form <i>(Submit an original, and a duplicate for fee processing)</i></p> <p>2. <input checked="" type="checkbox"/> Specification (Total Pages) <u>23</u> <i>(Preferred arrangement set forth below)</i></p> <ul style="list-style-type: none">- Descriptive title of the Invention- Cross References to Related Application- Statement Regarding Fed sponsored R & D- Reference to Microfiche Appendix- Background of the Invention- Brief Summary of the Invention- Brief Description of the Drawings (if filed)- Detailed Description- Claim(s)- Abstract of the Disclosure <p>3. <input checked="" type="checkbox"/> Drawing(s) (35 USC 113) (Total Pages) <u>8</u></p> <p>4. Oath or Declaration (Total Pages) <u>3</u></p> <p>a. <input checked="" type="checkbox"/> Newly executed (original or copy)</p> <p>b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63(d)) <i>(for continuation/divisional with Box 17 completed)</i> (Note Box 5 below)</p> <p>i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in prior application, see 37 CFR 1.63(d)(2) and 1.33(b).</p> <p>5. <input type="checkbox"/> Incorporation by Reference <i>(useable if Box 4b is checked)</i> The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.</p>	<p>6. <input type="checkbox"/> Microfiche Computer Program (Appendix)</p> <p>7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)</p> <p>a. <input type="checkbox"/> Computer Readable Copy</p> <p>b. <input type="checkbox"/> Paper Copy (identical to computer copy)</p> <p>c. <input type="checkbox"/> Statement verifying identity of above copies</p> <p>ACCOMPANYING APPLICATION PARTS</p> <p>8. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s))</p> <p>9. <input type="checkbox"/> 37 CFR 3.73(b) Statement (when there is an assignee) <input checked="" type="checkbox"/> Power of Attorney</p> <p>10. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>11. <input checked="" type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input checked="" type="checkbox"/> Copies of IDS Citations</p> <p>12. <input type="checkbox"/> Preliminary Amendment</p> <p>13. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i></p> <p>14. <input type="checkbox"/> Small Entity <input type="checkbox"/> Statement filed in prior application, Status still proper and desired</p> <p>15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>if foreign priority is claimed</i></p> <p>16. <input checked="" type="checkbox"/> Other: Express Mail Certificate</p>
--	--

17. If a **CONTINUING APPLICATION**, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.:

18. **CORRESPONDENCE ADDRESS**

☐ Customer Number or Bar Code Label 36491

☐ Or Correspondence address below

NAME	Brian C. Kunzler					
ADDRESS	10 West 100 South Suite 450					
CITY	Salt Lake City	STATE	Utah	ZIP	84101	
COUNTRY	United States	TELEPHONE	(801) 994-4646	FAX	(801) 531-1929	

Assignee Name: INTERNATIONAL BUSINESS MACHINES CORPORATION

Assignee Residence: Armonk, New York

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, D.C. 20231 DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.

22307 U.S. PTO
10/648582
08/25/03

Please type a plus sign (+) inside this box → +

PTO/SB/05 (12/97)

Approved for use through 9/30/03. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<h2 style="margin: 0;">FEE TRANSMITTAL</h2> <p style="font-size: small; margin-top: 10px;">Note: Effective October 1, 2001. Patent fees are subject to annual revision.</p>		Complete if Known	
		Application Number	Not yet assigned
		Filing Date	August 25, 2003
		First Named Inventor	Ralph T. Beeston et al.
		Group Art Unit	
		Examiner Name	
TOTAL AMOUNT OF PAYMENT	\$ 1186	Attorney Docket Number	TUC920030086US1

METHOD OF PAYMENT (check one)	FEE CALCULATION (continued)																																																																																																																																																																						
<p>1. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:</p> <p>Deposit Account Number: <u>09-0449</u></p> <p>Deposit Account Name: <u>IBM CORPORATION</u></p> <p>Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 Allowance <input checked="" type="checkbox"/> Charge the Issue Fee In 37 CFR at the Mailing of the Notice of <input type="checkbox"/></p> <p>2. <input type="checkbox"/> Payment Enclosed:</p> <p style="margin-left: 40px;"><input type="checkbox"/> Check <input type="checkbox"/> Money Order <input type="checkbox"/> Other</p>	<p>3. ADDITIONAL FEES</p> <table style="width: 100%; font-size: small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td>Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td>Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>1053</td><td>130</td><td>2053</td><td>130</td><td>Non-English specification</td><td></td></tr> <tr><td>1812</td><td>2520</td><td>1812</td><td>2520</td><td>For filing a request for reexamination</td><td></td></tr> <tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td>Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>1805</td><td>1840*</td><td>1805</td><td>1840*</td><td>Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td>Extension for reply within first month</td><td></td></tr> <tr><td>1252</td><td>410</td><td>2252</td><td>205</td><td>Extension for reply within second month</td><td></td></tr> <tr><td>1253</td><td>930</td><td>2253</td><td>465</td><td>Extension for reply within third month</td><td></td></tr> <tr><td>1254</td><td>1450</td><td>2254</td><td>725</td><td>Extension for reply within fourth month</td><td></td></tr> <tr><td>1255</td><td>1970</td><td>2255</td><td>985</td><td>Extension for reply within fifth month</td><td></td></tr> <tr><td>1401</td><td>320</td><td>2401</td><td>160</td><td>Notice of Appeal</td><td></td></tr> <tr><td>1402</td><td>320</td><td>2402</td><td>160</td><td>Filing a brief in support of an appeal</td><td></td></tr> <tr><td>1403</td><td>280</td><td>2403</td><td>140</td><td>Request for oral hearing</td><td></td></tr> <tr><td>1451</td><td>1510</td><td>1451</td><td>1510</td><td>Petition to institute a public use proceeding</td><td></td></tr> <tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td>Petition to revive - intentional</td><td></td></tr> <tr><td>1453</td><td>1300</td><td>2453</td><td>650</td><td>Petition to revive - unintentional</td><td></td></tr> <tr><td>1501</td><td>1300</td><td>2501</td><td>650</td><td>Utility issue fee</td><td></td></tr> <tr><td>1502</td><td>470</td><td>2502</td><td>235</td><td>Design issue fee</td><td></td></tr> <tr><td>1503</td><td>630</td><td>2503</td><td>315</td><td>Plant issue fee</td><td></td></tr> <tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td>Petitions to the Commissioner</td><td></td></tr> <tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td>Petitions related to provisional applications</td><td></td></tr> <tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td>Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td>Recording each patent assignment per property (times number of properties)</td><td style="text-align: center;">40</td></tr> <tr><td>1809</td><td>750</td><td>1809</td><td>375</td><td>Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>1810</td><td>750</td><td>2810</td><td>375</td><td>For each additional invention to be examined (37 CFR 1.129(b))</td><td></td></tr> </tbody> </table> <p>Other fee (specify) _____</p>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1051	130	2051	65	Surcharge - late filing fee or oath		1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet		1053	130	2053	130	Non-English specification		1812	2520	1812	2520	For filing a request for reexamination		1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action		1805	1840*	1805	1840*	Requesting publication of SIR after Examiner action		1251	110	2251	55	Extension for reply within first month		1252	410	2252	205	Extension for reply within second month		1253	930	2253	465	Extension for reply within third month		1254	1450	2254	725	Extension for reply within fourth month		1255	1970	2255	985	Extension for reply within fifth month		1401	320	2401	160	Notice of Appeal		1402	320	2402	160	Filing a brief in support of an appeal		1403	280	2403	140	Request for oral hearing		1451	1510	1451	1510	Petition to institute a public use proceeding		1452	110	2452	55	Petition to revive - intentional		1453	1300	2453	650	Petition to revive - unintentional		1501	1300	2501	650	Utility issue fee		1502	470	2502	235	Design issue fee		1503	630	2503	315	Plant issue fee		1460	130	1460	130	Petitions to the Commissioner		1807	50	1807	50	Petitions related to provisional applications		1806	180	1806	180	Submission of Information Disclosure Stmt		8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40	1809	750	1809	375	Filing a submission after final rejection (37 CFR 1.129(a))		1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																		
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																				
1051	130	2051	65	Surcharge - late filing fee or oath																																																																																																																																																																			
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																			
1053	130	2053	130	Non-English specification																																																																																																																																																																			
1812	2520	1812	2520	For filing a request for reexamination																																																																																																																																																																			
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																			
1805	1840*	1805	1840*	Requesting publication of SIR after Examiner action																																																																																																																																																																			
1251	110	2251	55	Extension for reply within first month																																																																																																																																																																			
1252	410	2252	205	Extension for reply within second month																																																																																																																																																																			
1253	930	2253	465	Extension for reply within third month																																																																																																																																																																			
1254	1450	2254	725	Extension for reply within fourth month																																																																																																																																																																			
1255	1970	2255	985	Extension for reply within fifth month																																																																																																																																																																			
1401	320	2401	160	Notice of Appeal																																																																																																																																																																			
1402	320	2402	160	Filing a brief in support of an appeal																																																																																																																																																																			
1403	280	2403	140	Request for oral hearing																																																																																																																																																																			
1451	1510	1451	1510	Petition to institute a public use proceeding																																																																																																																																																																			
1452	110	2452	55	Petition to revive - intentional																																																																																																																																																																			
1453	1300	2453	650	Petition to revive - unintentional																																																																																																																																																																			
1501	1300	2501	650	Utility issue fee																																																																																																																																																																			
1502	470	2502	235	Design issue fee																																																																																																																																																																			
1503	630	2503	315	Plant issue fee																																																																																																																																																																			
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																			
1807	50	1807	50	Petitions related to provisional applications																																																																																																																																																																			
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																			
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40																																																																																																																																																																		
1809	750	1809	375	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																			
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))																																																																																																																																																																			
<p>FEE CALCULATION</p> <p>1. FILING FEE</p> <table style="width: 100%; font-size: small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1001</td><td>750</td><td>2001</td><td>375</td><td>Utility filing fee</td><td style="text-align: center;">750</td></tr> <tr><td>1002</td><td>330</td><td>2002</td><td>165</td><td>Design filing fee</td><td></td></tr> <tr><td>1003</td><td>520</td><td>2003</td><td>260</td><td>Plant filing fee</td><td></td></tr> <tr><td>1004</td><td>750</td><td>2004</td><td>375</td><td>Reissue filing fee</td><td></td></tr> <tr><td>1005</td><td>160</td><td>2005</td><td>80</td><td>Provisional filing fee</td><td></td></tr> <tr> <td colspan="5">SUBTOTAL (1)</td> <td style="text-align: center;">\$ 750</td> </tr> </tbody> </table> <p>2. CLAIMS</p> <table style="width: 100%; font-size: small;"> <thead> <tr> <th></th> <th>Extra</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>Total Claims 28 - 20 =</td> <td style="border: 1px solid black; padding: 2px;">8</td> <td style="border: 1px solid black; padding: 2px;">18</td> <td style="border: 1px solid black; padding: 2px;">144</td> </tr> <tr> <td>Ind. Claims 6 - 3 =</td> <td style="border: 1px solid black; padding: 2px;">3</td> <td style="border: 1px solid black; padding: 2px;">84</td> <td style="border: 1px solid black; padding: 2px;">252</td> </tr> <tr> <td>Multiple Dep. Claims 0</td> <td style="border: 1px solid black; padding: 2px;">0</td> <td style="border: 1px solid black; padding: 2px;">280</td> <td style="border: 1px solid black; padding: 2px;">0</td> </tr> </tbody> </table> <table style="width: 100%; font-size: small;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>1202</td><td>18</td><td>2202</td><td>9</td><td>Claims in excess of 20</td><td></td></tr> <tr><td>1201</td><td>84</td><td>2201</td><td>42</td><td>Independent claims in excess of 3</td><td></td></tr> <tr><td>1203</td><td>280</td><td>2203</td><td>140</td><td>Multiple dependent claim</td><td></td></tr> <tr> <td colspan="5">SUBTOTAL (2)</td> <td style="text-align: center;">\$ 396</td> </tr> </tbody> </table>	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1001	750	2001	375	Utility filing fee	750	1002	330	2002	165	Design filing fee		1003	520	2003	260	Plant filing fee		1004	750	2004	375	Reissue filing fee		1005	160	2005	80	Provisional filing fee		SUBTOTAL (1)					\$ 750		Extra	Fee from below	Fee Paid	Total Claims 28 - 20 =	8	18	144	Ind. Claims 6 - 3 =	3	84	252	Multiple Dep. Claims 0	0	280	0	Large Entity		Small Entity		Fee Description	Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)	1202	18	2202	9	Claims in excess of 20		1201	84	2201	42	Independent claims in excess of 3		1203	280	2203	140	Multiple dependent claim		SUBTOTAL (2)					\$ 396	<p>SUBTOTAL (3) \$ 40</p> <p style="font-size: x-small;">*Reduced by Basic Filing Fee</p>																																																																						
Large Entity		Small Entity		Fee Description			Fee Paid																																																																																																																																																																
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																				
1001	750	2001	375	Utility filing fee	750																																																																																																																																																																		
1002	330	2002	165	Design filing fee																																																																																																																																																																			
1003	520	2003	260	Plant filing fee																																																																																																																																																																			
1004	750	2004	375	Reissue filing fee																																																																																																																																																																			
1005	160	2005	80	Provisional filing fee																																																																																																																																																																			
SUBTOTAL (1)					\$ 750																																																																																																																																																																		
	Extra	Fee from below	Fee Paid																																																																																																																																																																				
Total Claims 28 - 20 =	8	18	144																																																																																																																																																																				
Ind. Claims 6 - 3 =	3	84	252																																																																																																																																																																				
Multiple Dep. Claims 0	0	280	0																																																																																																																																																																				
Large Entity		Small Entity		Fee Description	Fee Paid																																																																																																																																																																		
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																				
1202	18	2202	9	Claims in excess of 20																																																																																																																																																																			
1201	84	2201	42	Independent claims in excess of 3																																																																																																																																																																			
1203	280	2203	140	Multiple dependent claim																																																																																																																																																																			
SUBTOTAL (2)					\$ 396																																																																																																																																																																		

SUBMITTED BY				Complete (if applicable)	
Typed or Printed Name	Brian C. Kunzler			Reg. Number	38,527
Signature			Date	Aug 25, 2003	Deposit Account User ID

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

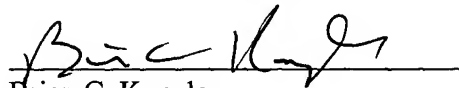
CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"Express Mail" Mailing Label No.: ER211528425US

Date of Deposit: August 25, 2003

I hereby certify that this patent application in the name of Ralph T. Beeston, Kirby G. Dahman, Gavin S. Johnson, and Trang T. Le for APPARATUS, SYSTEM, AND METHOD TO ESTIMATE MEMORY FOR RECOVERING DATA, together with the drawings, a Declaration, Power of Attorney, and Petition, an Assignment and Recordation Form Cover Sheet, Information Disclosure Statement, PTO Form 1449, and Copies of Cited References are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above in an envelope addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Respectfully submitted,



Brian C. Kunzler
Reg. No. 38,527
Attorney for Applicant

Date: August 25, 2003

Brian C. Kunzler, P.C.
10 West 100 South, Suite 450
Salt Lake City, Utah 84101
Telephone: 801/994-4646